



## Air Quality Permitting Technical Memorandum

Tier II Operating Permit and Permit to Construct No. T2-020029

AIRS Facility No. 777-00026

Nelson Construction Co.  
Boise, Idaho

Prepared by:

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Permit Writer

**FINAL**

## LIST OF ACRONYMS

AFS	AIRS Facility Subsystem
AIRS	Aerometric Information Retrieval System
AQCR	Air Quality Control Region
CFR	Code of Federal Regulations
CO	carbon monoxide
DEQ	Department of Environmental Quality
EPA	U.S. Environmental Protection Agency
HAPs	hazardous air pollutants
IDAPA	a numbering designation for all administrative rules in Idaho promulgated in accordance with the Idaho Administrative Procedures Act
MACT	Maximum Available Control Technology
NESHAP	National Emission Standards for Hazardous Air Pollutants
NO <sub>x</sub>	nitrogen oxides
NSPS	New Source Performance Standards
PM <sub>10</sub>	particulate matter with an aerodynamic diameter of 10 micrometers or less
PSD	Prevention of Significant Deterioration
PTC	permit to construct
SIP	State Implementation Plan
SO <sub>2</sub>	sulfur dioxide
T/yr	tons per year
VOC	volatile organic compound

## **PURPOSE**

The purpose for this memorandum is to satisfy the requirements of the *Rules for the Control of Air Pollution in Idaho*, IDAPA 58.01.01 Sections 400-470 for Tier II operating permits and Sections 200-228 for permits to construct.

## **PROJECT DESCRIPTION**

This project is for the issuance of a Tier II operating permit and permit to construct to Nelson Construction Co., located in Boise, as part of the Northern Ada County PM<sub>10</sub> Maintenance Plan (maintenance plan). The facility includes rock crushers, screen decks, transfer points, stockpiles, vehicle traffic, and a 1250-kW diesel fuel-fired generator for use when line power is unavailable.

## **FACILITY DESCRIPTION**

Nelson Construction Co. operates a gravel mining, crushing, and screening facility.

## **SUMMARY OF EVENTS**

On May 15, 1998, DEQ issued Nelson Construction Co. Permit No. 777-00226. This permit limits NO<sub>x</sub> emissions from the generator to 98.3 T/yr and facility-wide PM<sub>10</sub> emissions to 99 T/yr. Of the total PM<sub>10</sub> emissions, the generator only contributes 2 T/yr. In order to meet the requirements of the maintenance plan, crusher throughput has been reduced to 2,080,000 T/yr, which equates to an annual PM<sub>10</sub> emission rate of 20 T/yr.

## **DISCUSSION**

### **1. Emission Estimates**

The facility has the option of operating either as a four-or three-crusher facility. When operating as a four-crusher facility, the PM<sub>10</sub> emissions shall be determined by multiplying the throughput of material passing through the initial crusher by the emission factor of 0.058 pounds of PM<sub>10</sub> emissions per ton of material throughput. When the facility is operating as a three-crusher facility, the PM<sub>10</sub> emissions shall be determined by multiplying the throughput of material passing through the initial crusher by the emission factor of 0.037 pounds of PM<sub>10</sub> emissions per ton of material throughput.

The summation of the PM<sub>10</sub> emissions of these two operational setups shall not exceed the associated limit stated in the appendix of this permit. The emission factors were determined from the standard spreadsheet developed by DEQ specifically for rock crushers.

### **2. Modeling**

The modeling for Nelson Construction Co. was originally directed to the only point source (generator stack) in the original permit. The rest of the facility's emissions are associated fugitive emissions generated by the production of crushed rock. The modeling of a 20 tons-per-year PM<sub>10</sub> limit for Nelson Construction Co. was performed in the projected model of the maintenance plan. The limit of 20 T/yr with fugitives included satisfies the maintenance plan. The emission potential needs an enforceable limit to meet the requirements of the Northern Ada County PM<sub>10</sub> Maintenance Plan.

### **3. Area Classification**

This facility is located within the Northern Ada County PM<sub>10</sub> Maintenance Area. Ada County is located within AQCR (64), Zone 11. This area is unclassifiable for all regulated criteria air pollutants.

4. Facility Classification

The plant is not a designated facility as defined in IDAPA 58.01.01.006.25. The facility is classified as a B source because the actual emissions of any criteria pollutant is less than 100 T/yr.

5. Regulatory Review

This permit is subject to the following permitting requirements:

- |    |                                 |  |
|----|---------------------------------|--|
| a. | <u>IDAPA 58.01.01.401</u>       | Tier II Operating Permit   |
| b. | <u>IDAPA 58.01.01.403</u>       | Permit Requirements for Tier II Sources                            |
| c. | <u>IDAPA 58.01.01.404.01(c)</u> | Opportunity for Public Comment                                     |
| d. | <u>IDAPA 58.01.01.404.04</u>    | Authority to Revise or Renew Operating Permits                     |
| e. | <u>IDAPA 58.01.01.406</u>       | Obligation to Comply   |
| f. | <u>IDAPA 58.01.01.470</u>       | Permit Application Fees for Tier II Permits                        |
| g. | <u>IDAPA 58.01.01.625</u>       | Visible Emission Limitation  |
| h. | <u>IDAPA 58.01.01.650</u>       | General Rules for the Control of Fugitive Dust                     |
| i. | <u>40 CFR 60 Subpart OOO</u>    | Standards of Performance for Nonmetallic Mineral Processing Plants |

6. AIRS

**AIRS/AFS<sup>a</sup> FACILITY-WIDE CLASSIFICATION<sup>b</sup> DATA ENTRY FORM**

AIR PROGRAM	SIP	PSD	NSPS (Part 60)	NESHAP (Part 61)	MACT (Part 63)	TITLE V	AREA CLASSIFICATION
POLLUTANT							A – Attainment U – Unclassifiable N – Nonattainment
SO <sub>2</sub>	B	B				B	U
NO <sub>x</sub>	B	B				B	U
CO	B	B				B	U
PM <sub>10</sub>	B	B				B	U
PT (Particulate)	B	B	B			B	U
VOC	B	B				B	U
THAP (Total HAPs)							
			APPLICABLE SUBPART				
			OOO				

<sup>a</sup> Aerometric Information Retrieval System (AIRS) Facility Subsystem (AFS)

<sup>b</sup> AIRS/AFS Classification Codes:

A = Actual or potential emissions of a pollutant are above the applicable major source threshold. For NESHAP only, class "A" is applied to each pollutant which is below the 10 T/yr threshold, but which contributes to a plant total in excess of 25 T/yr of all NESHAP pollutants.

SM = Potential emissions fall below applicable major source thresholds if and only if the source complies with federally enforceable regulations or limitations.

B = Actual and potential emissions below all applicable major source thresholds.

C = Class is unknown.

ND = Major source thresholds are not defined (e.g., radionuclides).

## **FEES**

Renewal fees are not required for this permit so long as the facility remains a minor facility. Processing fees associated with any permit modification apply to the extent required by the *Rules*.

## **RECOMMENDATIONS**

Based on the review of the application materials and all applicable state and federal regulations, staff recommends DEQ issue a final Tier II Operating Permit and Permit to Construct No. T2-020029 to Nelson Construction Co.

REB/BR:br